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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/976,669	10/11/2001	Julian Lewkowicz	3123-310	1106

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EXAMINER	
NEGRON, DANIELL L	
ART UNIT	**PAPER NUMBER**
2651	

DATE MAILED: 01/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/976,669	LEWKOWICZ ET AL.	
	Examiner	Art Unit	
	Daniell L. Negrón	2651	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 September 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,4-33,36,39-43 and 46* is/are pending in the application.

4a) Of the above claim(s) ____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,4-33,36,39-43 and 46* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *11 October 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement (IDS) submitted on September 22, 2004 is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1, 4-6, 11-14, 18-26, 29, 33, 36, and 39-43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Okamura U.S. Patent No. 5,831,781 in view of Shu U.S. Patent No. 6,049,440.

Regarding claims 1, 12, and 13, Okamura discloses a method comprising the steps of providing a disk surface` that is divided into a plurality of zones (see Fig. 3), the disk surface having a head associated therewith (column 4, lines 23-30).

Okamura also discloses a method comprising the steps of measuring amplitudes of a plurality of AGC fields in a self-test (i.e. self-calibrating) procedure in a first of the plurality of zones and storing a calibrated value which is based upon the measured amplitudes for use in determining whether a high fly height condition exists in the first of the plurality of zones (column 5, line 65 through column 6, line 6).

amplitude of an AGC field in the first of a plurality of the plurality of zones in response to the write command and comparing the measured amplitude to the calibrated value (column 7, lines 27-32).

Okamura further discloses a method including the steps of writing the block of data onto the disk surface in a data sector associated with the AGC field in the first of the plurality of zones and determining whether the measured amplitude is within a predetermined tolerance in comparison to the calibrated value (column 8, lines 32-43).

Okamura further discloses a method wherein the block of data is written onto the disk surface regardless of whether the measured amplitude is within the predetermined tolerance (see Fig. 8 and column 8, lines 39-47). Okamura however fails to show a step of storing the calibrated value onto the disk surface.

However, Shu discloses a method of storing a compensation value onto the surface of a magnetic disk in a reserved sector for the purpose of making accurate corrections in a timely manner when reading a particular sector (i.e. zone) (column 2, line 57 through column 3, line 2 and column 9, lines 34-46).

Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the method disclosed by Okamura with the compensation value method as taught by Shu in order to obtain a method wherein calibrated values are stored onto the disk surface making the stored values associated with a particular zone readily accessible providing the disk drive with a more efficient and rapid fly height detection method.

Regarding claims 4 and 5, Okamura discloses a method including the steps of re-measuring the amplitude of the AGC field in the first of the plurality of zones when the

measured amplitude is outside of the predetermined tolerance in comparison to the calibrated value and (column 8, lines 44-59).

Regarding claims 6, 11, 14, 18, 19, and 40, the rejections applied to claims 4-6, 11, 14, 18, 19, and 40 in the previous Office action mailed March 10, 2004 are herein repeated for the same reasons (see Response to Arguments).

Regarding claims 20-26 and 29, claims 20-26 and 29 have limitations similar to those treated in the above rejections of claims 1, 4-8 and 14, and are met by the references as discussed above.

Regarding claim 33, apparatus claim 33 is drawn to the apparatus corresponding to the method of using same as claimed in claim 1. Therefore apparatus claim 33 corresponds to method claim 1, and is rejected for the same reasons of obviousness as used above.

Regarding claims 36, 39, and 41-43, claims 36, 39, and 41-43 have limitations similar to those treated in the above rejections of claims 1 and 4-14, and are met by the references as discussed above.

4. Claims 7, 8, 15-17, and 30-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Okamura U.S. Patent No. 5,831,781 as modified by Shu U.S. Patent No. 6,049,440 as applied to claim 3 above, and further in view of Okamura U.S. Patent No. 5,808,825.

Regarding claims 7, 8, 15-17, and 30-32, the rejections applied to claims 7, 8, 15-17, and 30-32 in the previous Office action mailed March 10, 2004 are herein repeated for the same reasons (see Response to Arguments).

5. Claims 9 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Okamura U.S. Patent No. 5,831,781 as modified by Shu U.S. Patent No. 6,049,440 as applied to claim 6 further in view of Abiko U.S. Patent No. 4,835,757.

Regarding claims 9 and 27, the rejections applied to claims 9 and 27 in the previous Office action mailed March 10, 2004 are herein repeated for the same reasons (see Response to Arguments).

6. Claims 10 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Okamura U.S. Patent No. 5,831,781 as modified by Shu U.S. Patent No. 6,049,440 as applied to claim 6, further in view of Schaff U.S. Patent No. 6,275,029.

Regarding claims 10 and 28, the rejections applied to claims 10 and 28 in the previous Office action mailed March 10, 2004 are herein repeated for the same reasons (see Response to Arguments).

7. Claim 46 is rejected under 35 U.S.C. 103(a) as being unpatentable over Okamura U.S. Patent No. 5,831,781 as modified by Shu U.S. Patent No. 6,049,440 as applied to claim 5 and further in view of Ueno et al U.S. Patent No. 5,918,001.

Regarding claim 46, Okamura as modified by Shu disclose a method including all the limitations of claim 5 as discussed above but fail to show a step of writing the block of data to a different data sector on the disk surface only after a burnishing operation has been performed in connection with attempting to write the block of data.

Ueno et al however disclose a method of recovering data affected by errors on the disk surface wherein a block of data is written to a different data sector (i.e. reassign) after a attempt to burnish the disk surface and recover an area where data has been stored for the purpose of

preventing loss of data written onto an area on the disk surface where data may not be able to be read or written due to permanent defects on the disk (column 2, lines 17-29 and column 5, line 46 through column 6, line 28).

Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the method disclosed by Okamura as modified by Shu with the method of data recovery as taught by Ueno et al in order to reliably store data in an alternate sector on a disk surface and protect data from being lost or damaged in the event that a burnishing operation is unsuccessful due if an to permanent errors or defects on the disk surface.

Response to Arguments

8. Applicant's arguments filed September 14, 2004 have been fully considered but they are not persuasive.

Regarding claims 1, 33, and 36, Applicant on pages 13 and 14 of the response filed on September 14, 2004 argues that Okamura U.S. Patent No. 5,831,781 teaches away from writing a block of data onto the disk surface regardless of whether the measured amplitude is within the predetermined tolerance. The Examiner however, respectfully disagrees since the disclosure on column 8, lines 39-47 shows a method of retrying a write operation upon determining that amplitude is beyond a predetermined tolerance. Since what is being executed by the method disclosed by Okamura is a **retry** write operation, a block of data has already been written to the disk surface and it is therefore considered that a data block is written onto the disk surface regardless of whether the measured amplitude is within the predetermined tolerance.

Regarding claim 5, Applicant on pages 13 and 14 of the response filed on September 14, 2004 argues that Okamura U.S. Patent No. 5,831,781 fails to disclose "re-writing

the block of data onto the disk surface in the data sector associated with the AGC field in the first of the plurality of zones" and that no re-writing of data occurs in the cited reference, however the Examiner respectfully disagrees. As discussed in regards to claims 1, 33, and 36, Okamura discloses a method wherein a write retry is executed in relation to the measured amplitude not being within the predetermined tolerance. For the reasons discussed above it is considered that the disclosure of Okamura et al is consistent with the limitations of the current application as claimed.

Conclusion

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniell L. Negrón whose telephone number is 703-305-6985. The examiner can normally be reached on Monday-Friday (8:30-6:00) Alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sinh N. Tran can be reached on 703-305-4040. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DLN
January 12, 2005

SINH TRAN
PRIMARY EXAMINER

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